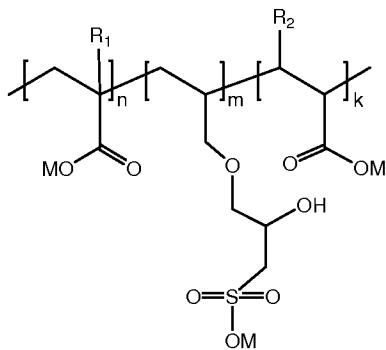


CLAIM LISTING

This listing of claims replaces all prior versions and listings of claims in the application.

1. (currently amended) A process for the treatment of a fibre material comprising contacting the fibre material in an aqueous medium with a chelating agent and a polymer having the following general formula



I

wherein

R₁ is a hydrogen atom or an alkyl group containing 1 to 12 carbon atoms,

R₂ is -COOM or -CH₂COOM,

M is a hydrogen atom, an alkali metal ion, an alkaline earth metal ion, an ammonium ion or a mixture thereof,

n, m and k are molar ratios of corresponding monomers, wherein n is 0 to 0.95, m is 0.05 to 0.9, and k is 0 to 0.8, and (n+m+k) equals 1, and

the weight average molecular weight is between 500 and 20,000,000 g/mol; and

wherein the fibre material is a cellulosic fibre material comprising a chemical, mechanical or chemi-mechanical pulp or a recycled fibre material; and

wherein the weight ratio of the polymer to the chelating agent is from 1:4 to 4:1.

2. (original) The process according to claim 1 wherein the chelating agent and the polymer are introduced as a mixture or the chelating agent and the polymer are introduced separately.

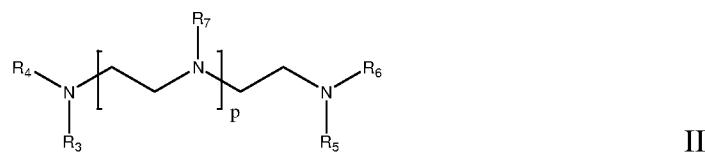
3. (canceled)

4. (previously presented) The process according to claim 1 wherein the treatment comprises bleaching the fibre material with an alkaline peroxide solution in the presence of the chelating agent and the polymer.
5. (original) The process according to claim 4 wherein the bleaching is preceded by a treatment with a chelating agent.
6. (previously presented) The process according to claim 1, wherein the treatment comprises pretreating the fibre material in the aqueous medium comprising the chelating agent and the polymer.
7. (previously presented) The process according to claim 6 wherein the pH of the aqueous medium in the pretreatment is between 3 and 7.
8. (previously presented) The process according to claim 6 wherein the pretreatment is followed by a bleaching with a peroxygen compound optionally in the presence of the chelating agent and the polymer.
9. (original) The process according to claim 8 wherein the peroxygen compound is hydrogen peroxide, peracetic acid or Caro's acid.
10. (previously presented) The process according to claim 1 wherein the fibre material comprises a recycled fibre material, and wherein the treatment further comprises de-inking the recycled fiber material in the aqueous medium comprising the chelating agent and the polymer.
11. (previously presented) The process according to any of claims 1 wherein in formula I n is 0.4 to 0.9, m is 0.1 to 0.5, and k is 0 to 0.5.
12. (previously presented) The process according to claim 1 wherein the weight average molecular weight of the copolymer is between 1,000 and 1,000,000 g/mol.
13. (previously presented) The process according to claim 1 wherein the total amount of the chelating agent and the polymer in the treatment is 0.05 to 10 kg per ton of dry fibre material.

14. (canceled)

15. (previously presented) The process according to claim 1 wherein the polymer is a copolymer of 3-allyloxy-2-hydroxypropanesulfonic acid and at least one of acrylic acid, methacrylic acid, maleic acid, itaconic acid, or a salt thereof.

16. (previously presented) The process according to claim 1 wherein the chelating agent is a compound having the following general formula



wherein

p is 0 or an integer of 1 to 10,

R₃, R₄, R₅, R₆ and R₇ are independently a hydrogen atom or an alkyl chain having 1 to 6 carbon atoms and containing an active chelating ligand.

17. (previously presented) The process according to claim 1 wherein the chelating agent is a compound having the following general formula

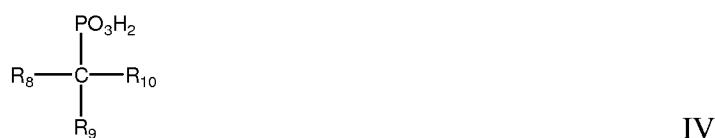


wherein

q is an integer of 3 to 10,

R₃, R₄, R₅ and R₆ are independently a hydrogen atom or an alkyl chain having 1 to 6 carbon atoms and containing an active chelating ligand.

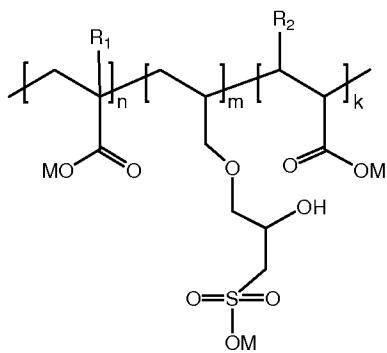
18. (previously presented) The process according to claim 1 wherein the chelating agent is a compound having the following general formula



wherein

R₈ is a hydrogen atom, an alkyl group containing 1 to 6 carbon atoms or an alkyl chain having 1 to 6 carbon atoms and containing a carboxylic, phosphonic or hydroxyl group, R₉ is a hydrogen atom, hydroxyl group, phosphonic group, carboxylic group or alkyl chain having 1 to 6 carbon atoms and containing one or two carboxylic groups, and R₁₀ is a hydrogen atom, hydroxyl group, carboxylic group, alkyl group containing 1 to 6 carbon atoms or alkyl chain having 1 to 6 carbon atoms and containing a carboxylic group, or a salt thereof.

19. (currently amended) A composition comprising a chelating agent and a polymer having the following general formula



I

wherein

R₁ is a hydrogen atom or an alkyl group containing 1 to 12 carbon atoms,

R₂ is -COOM or -CH₂COOM,

M is a hydrogen atom, an alkali metal ion, an alkaline earth metal ion, an ammonium ion or a mixture thereof,

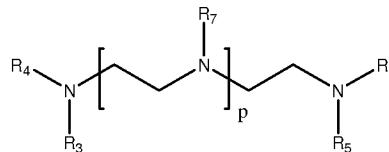
n, m and k are molar ratios of corresponding monomers, wherein n is 0 to 0.95, m is 0.05 to 0.9, and k is 0 to 0.8, and (n+m+k) equals 1, and

the weight average molecular weight is between 500 and 20,000,000 g/mol; and

wherein the weight ratio of the polymer to the chelating agent is from 1:4 to 4:1; and

wherein the chelating agent is

a compound having the following general formula



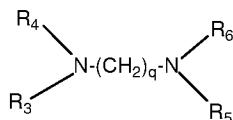
II

wherein

p is 0 or an integer of 1 to 10,

R₃, R₄, R₅, R₆ and R₇ are independently a hydrogen atom or an alkyl chain having 1 to 6 carbon atoms and containing an active chelating ligand; or

a compound having the following general formula



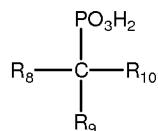
III

wherein

q is an integer of 3 to 10,

R₃, R₄, R₅ and R₆ are independently a hydrogen atom or an alkyl chain having 1 to 6 carbon atoms and containing an active chelating ligand; or

a compound having the following general formula



IV

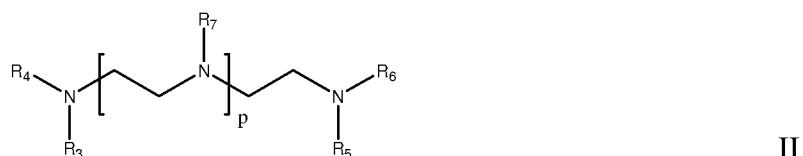
wherein

R₈ is a hydrogen atom, an alkyl group containing 1 to 6 carbon atoms or an alkyl chain having 1 to 6 carbon atoms and containing a carboxylic, phosphonic or hydroxyl group,

R₉ is a hydrogen atom, hydroxyl group, phosphonic group, carboxylic group or alkyl chain having 1 to 6 carbon atoms and containing one or two carboxylic groups, and

R₁₀ is a hydrogen atom, hydroxyl group, carboxylic group, alkyl group containing 1 to 6 carbon atoms or alkyl chain having 1 to 6 carbon atoms and containing a carboxylic group, or a salt thereof.

20. (original) The composition according to claim 19 wherein in formula I n is 0.4 to 0.9, m is 0.1 to 0.5, and k is 0 to 0.5.
21. (previously presented) The composition according to claim 19 wherein the weight average molecular weight of the copolymer is between 1,000 and 1,000,000 g/mol.
22. (canceled)
23. (previously presented) The composition according to claim 19 wherein the polymer is a copolymer of 3-allyloxy-2-hydroxypropanesulfonic acid and at least one of acrylic acid, methacrylic acid, maleic acid, itaconic acid or a salt thereof.
24. (previously presented) The composition according to claim 19, wherein the chelating agent is a compound having the following general formula



wherein

p is 0 or an integer of 1 to 10,
R₃, R₄, R₅, R₆ and R₇ are independently a hydrogen atom or an alkyl chain having 1 to 6 carbon atoms and containing an active chelating ligand.

25. (previously presented) The process of claim 1, wherein treatment of the fibre material further comprises bleaching the fibre material in an aqueous medium.

26. (previously presented) The process of claim 1, wherein treatment of the fibre material further comprises deinking of a recycled fibre material.